

Notice of Allowability

Application No.

09/478,677

Examiner

Clark F. Dexter

Applicant(s)

HWANG, BER-FONG

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the response filed on May 14, 2004.
2. ☒ The allowed claim(s) is/are 18-22 and 24.
3. ☒ The drawings filed on 10 September 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Kenneth Lao on August 20, 2004.

2. The application has been amended as follows:

In the Claims

Claim 18 has been rewritten as follows:

18. (currently amended) A foam cutting apparatus machine with a vertical blade strip (90') and a horizontal blade strip (90), comprising:

an apparatus body (10) having a working surface (11) linearly and reciprocally movable back and forth for moving a work piece placed thereon; and

a frame (20) bridging over the apparatus body (10), the frame having two substantially upright columns defining ~~an~~ first and second sides (101, 102) of the frame (20) and two transverse beams defining ~~an~~ third and fourth sides (103, 104) of the frame (20), the two transverse beams connected between the two upright columns to define a substantially rectangular winding space for accommodating a vertical cutting device (17) and a horizontal cutting device (16); ~~wherein~~

the horizontal cutting device (16) comprising:

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a first guide rail (21) disposed on adjacent to the first side (101) of the frame (20),

a first linear slide bar (22a) disposed on between the first side (101) of the frame (20) and ~~the first linear slide bar~~ substantially parallel to the first guide rail (21),

a second linear slide bar (22b) disposed on adjacent to the second side (102) of the frame (20),

a third linear slide bar (22c) disposed on between the second side (102) of the frame (20) and ~~the third linear slide bar (22c)~~ spaced from and substantially parallel to the second linear slide bar (22b),

a first blade turning unit (32a) movably engaged with the guide rail (21) and the first linear slide bar (22a), the first blade turning unit (32a) having a first blade seat (33a) mounting a first blade holder (51a), the first blade holder (51a) holding the horizontal blade strip (90); and defining one end of a working section (X) of the horizontal blade strip (90), wherein the first blade turning unit (32a) is capable of turning the working section (X) of the horizontal blade strip at a deflection angle when cutting an irregular or curved shape;

a second blade turning unit (32b) movably engaged with the second linear slide bar (22b), the second blade turning unit (32b) having a second blade seat (33b) mounting a second blade holder (51b), the second blade holder (51b) holding the horizontal blade strip (90); and defining the other end of the working section (X) of the horizontal blade strip (90), wherein the second blade turning unit is capable of turning the working section (X) of the horizontal blade strip along with the first blade turning unit (32a);

a first wheel set (40) including a first driving wheel (41) disposed near a corner between the second side (102) and the fourth side (104) of the frame (20), a first pulley (43) movably engaged with the first linear slide bar (22a), a second pulley (47) spaced from and independently mounted with respect to the second blade turning unit (32b) and movably engaged with the third linear slide bar (22c), and first and second ~~two~~ guide wheels (44, 45) separately disposed adjacent to

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the first and second sides (101, 102) near the third side (103) of the frame (20), wherein the wheel set (40) is used for winding the horizontal blade strip (90) in a closed loop with a fixed length, and the first wheel set further includes a third guide wheel (46) disposed near the first driving wheel (41) for keeping the loop in tension, and wherein the first pulley (43) is connected to a the first blade turning unit (32a) for moving the first blade turning unit (32a) along the guide rail (21) when the first pulley (43) is moved along the first linear slide bar (22a); and

a first transmission mechanism (23, 24) operatively connected to the first and second pulleys (43, 47) and to the second blade turning unit (32b) for simultaneously moving the first and second pulleys (43, 47) and the second blade turning unit (32b), respectively, along the first, third and second and third linear slide bars (22a, 22c, 22b) so as to move the working section (X) up and down while maintaining the working section (X) substantially parallel to the working surface (11); and

the vertical cutting device (17) comprising:

a second guide rail (21') disposed on adjacent to the fourth side (104) of the frame (20),

a fourth ~~first~~ linear slide bar (22'a) disposed on ~~between~~ the fourth side (104) of the frame (20) and ~~the first linear slide bar (21')~~ substantially parallel to the second guide rail (21'),

a fifth ~~second~~ linear slide bar (22'b) disposed on ~~adjacent to~~ the third side (103) of the frame (20),

a sixth ~~third~~ linear slide bar (22'c) disposed on ~~between~~ the third side (103) of the frame (20) and ~~third linear slide bar~~ spaced from and substantially parallel to the fifth ~~second~~ linear slide bar (22'b),

a third ~~first~~ blade turning unit (32'a) movably engaged with the second guide rail (21') and the fourth linear slide bar (22a), the third ~~first~~ blade turning unit (32'a) having a third ~~first~~ blade seat (33'a) mounting a third ~~first~~ ~~further~~ blade holder (51'a), the third ~~first~~ ~~further~~ blade holder (51'a) holding the vertical blade strip (90'), and defining one end of a working section (Y) of the vertical blade strip

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(90'), wherein the third first blade turning unit (32'a) is capable of turning the working section (Y) of the vertical blade strip (90') at a deflection angle when cutting an irregular or curved shape;

a fourth ~~second~~ blade turning unit (32'b) movably engaged with the fifth ~~second~~ linear slide bar (22'b), the fourth ~~second~~ blade turning unit (32'b) having a fourth ~~second~~ blade seat (33'b) mounting a fourth ~~second~~ ~~further~~ blade holder (51'b), the fourth ~~second~~ ~~further~~ blade holder (51'b) holding the vertical blade strip (90'), and defining the other end of the working section (Y) of the vertical blade strip (90'), wherein the fourth ~~second~~ blade turning unit (32'b) is capable of turning the working section (Y) of the vertical blade strip (90') along with the third ~~first~~ blade turning unit (32'a);

a second wheel set (40') including a second driving wheel (41') disposed near a corner between the third side (103) and the first side (101) of the frame (20), a third ~~first~~ pulley (43') movably engaged with the fourth ~~first~~ linear slide bar (22'a), a fourth ~~second~~ pulley (47') spaced from and independently mounted with respect to the fourth ~~second~~ blade turning unit (32'b) and movably engaged with the sixth ~~third~~ linear slide bar (22'c), ~~two~~ fourth and fifth guide wheels (44', 45') separately disposed adjacent to the fourth and third sides (104, 103) near the second side (102) of the frame (20), wherein the second wheel set (40') is used for winding the vertical ~~horizontal~~ blade strip (90') in a closed loop with a fixed length, and the second wheel set further includes a sixth guide wheel (46') disposed near the second driving wheel (41') for keeping the loop in tension, and wherein the fourth ~~first~~ pulley (43') is connected to the third ~~a first~~ blade turning unit (32'a) for moving the third ~~first~~ blade turning unit (32'a) along the second guide rail (21') when the fourth ~~first~~ pulley (43') is moved along the third ~~first~~ linear slide bar (22'a);

a second transmission mechanism (23', 24') operatively connected to the fourth and fifth ~~first and second~~ pulleys (43', 47') and to the fourth blade turning unit (32'b) for simultaneously moving the fourth and fifth ~~first and second~~ pulleys (43', 47') and the fourth blade turning unit (32'b), respectively, along the fourth,

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sixth and fifth ~~first and third~~ linear slide bars (22'a, 22'c, 22'b) so as to move the working section (Y) left and right while maintaining the working section (Y) substantially perpendicular to the working surface (11).--.

Claim 20, line 2, "first and second" has been changed to --horizontal and vertical--.

Claim 23 has been canceled.

Claim 24 has been rewritten as follows:

--24. (Currently amended) The foam sponge cutting apparatus of claim 18 ~~23~~, wherein the horizontal cutting device further comprises:

a first thread rod (31) disposed in relation to the first linear slide bar (22a) and mechanically engaged with the first transmission mechanism (24) for moving the first pulley (43) along the first linear slide bar (22a);

a second thread rod (31) disposed in relation to the second linear slide bar (22b) and mechanically engaged with the first transmission mechanism (24) for moving the second blade turning unit (32b) along the second slide bar (22b); and

a third thread rod (31) disposed in relation to the third linear slide bar (22c) and mechanically engaged with the first transmission mechanism (24) for moving the second pulley (47) along the third linear slide bar (22c).--.

In the Specification

Page 3, line 19, the following has been inserted after "frame 20":

--, the blade strip frame 20 including a left column 101, a right column 102, an upper horizontal beam 103 and a lower horizontal beam 104--.

Additional Prior Art

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The newly-cited prior art disclose inventions which have features similar to the claimed invention. However, these inventions, each taken alone or in

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combination with the prior art of record, do not teach or fairly suggest the claimed invention.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clark F. Dexter whose telephone number is (703)308-1404. The examiner can be reached Monday through Friday during normal business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N. Shoap can be reached on (703)308-1082. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Clark F. Dexter
Primary Examiner
Art Unit 3724

cfd
August 20, 2004